HealthIT.gov

National Learning Consortium

Advancing America's Health Care

What Do Hospital CIOs Need To Know About Health Information Exchange?

Outreach Materials

Provided By:
The National Learning Consortium (NLC)

Developed By:
The Office of the National Coordinator for Health Information Technology
State Health Information Exchange Program

NATIONAL LEARNING CONSORTIUM

The National Learning Consortium (NLC) is a virtual and evolving body of knowledge and resources designed to support healthcare providers and health IT professionals working towards the implementation, adoption and meaningful use of certified EHR systems.

The NLC represents the collective EHR implementation experiences and knowledge gained directly from the field of ONC's outreach programs (REC, Beacon, State HIE) and through the Health Information Technology Research Center (HITRC) Communities of Practice (CoPs).

The following resource can be used in support of the EHR Implementation Lifecycle. It is recommended by "boots-on-the-ground" professionals for use by others who have made the commitment to implement or upgrade to certified EHR systems.

EHR Implementation Lifecycle

DESCRIPTION & INSTRUCTIONS

The 'Exchange 101: Introduction to Direct Adoption and Implementation' outreach materials are intended to aid providers and health IT implementers with EHR Implementation Step 5: Achieve Meaningful Use. The collection of outreach materials can be used to educate different audiences about health information exchange using the Direct solution in support of implementing care coordination meaningful use objectives.

This specific resource includes an overview for CIOs of how Direct exchange works, what CIOs need to consider for Direct exchange, and information on enrolling in Direct.

Distribute these materials to the appropriate audiences to educate them about using Direct for health information exchange.

TABLE OF CONTENTS

LIST OF EXHIBITS

What Do Hospital CIOs Need To Know About Health Information Exchange?

The health care market is moving toward a patient-centered record. Health information exchange (HIE) is becoming the standard of care among clinical practitioners.

More than half of physicians are now using electronic health records (EHR) systems and about three-quarters of their EHR systems are reported to meet the meaningful use criteria set by the EHR Meaningful Use Incentive Payment Program.[i] As part of this program, the Centers for Medicare and Medicaid Services (CMS) have issued over $7B in incentive payments to more than 130,000 eligible providers.[ii] CMS published guidance for meaningful use stage two on August 23, 2012, specifying that eligible providers must connect with at least three external providers that do not use the same EHR solution, or they must establish an ongoing connection with at least one health information exchange entity. These providers must also review 80% of patient medication regimens at time of admission, transfer, or discharge, a process commonly known as medication reconciliation.[iii] Additionally, emerging innovative care delivery models like Accountable Care Organizations and Patient-Centered Medical Homes will likely demand some form of health information exchange among participating providers.[iv,v]

> **THE EHR MEANINGFUL USE INCENTIVE PAYMENT PROGRAM**
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> This federal program, created by the HITECH Act and maintained by the Centers for Medicare and Medicaid Services, provides financial incentives to physicians and hospitals that adopt health information technology, including electronic health records and health information exchange.

Patients and families expect to interact with their health information and communicate electronically with their providers.

Health care providers are looking to adopt health information technology (HIT) to meet growing consumer demand. Patients are increasingly technology-savvy. They are accustomed to technology that provides them access to all of their information (i.e. mobile banking and smartphones). Similarly, they expect to have access to their health information and are often surprised to learn the capability is not already present in their doctors' offices.[vi,vii] With an increasingly technology-enabled society, most patients are accustomed to communicating electronically using text messaging and email, and they expect to be able to communicate with their doctors in a comparable manner. Stage 2 meaningful use guidance supports this demand, requiring participating eligible providers to make clinical summaries available to patients through a portal or personal health record (PHR) within 24 hours of the visit. Patients should also have the opportunity to access their longitudinal record through a portal or PHR at any time. To qualify for incentives, providers must provide online access to health information for over 50% of their patients. Stage 2 meaningful use criteria also require providers to enter an electronic progress note for more than 30% of unique patients.[viii] Hospitals will need to consider adopting health information exchange to help their practitioners receive financial incentives associated with meaningful use and to meet the demands of their referral networks and those of their patients.

How does Direct exchange work?

Direct exchange is inexpensive, quickly-deployed, nationally-endorsed, standards-based, and not tied to any vendor solution.
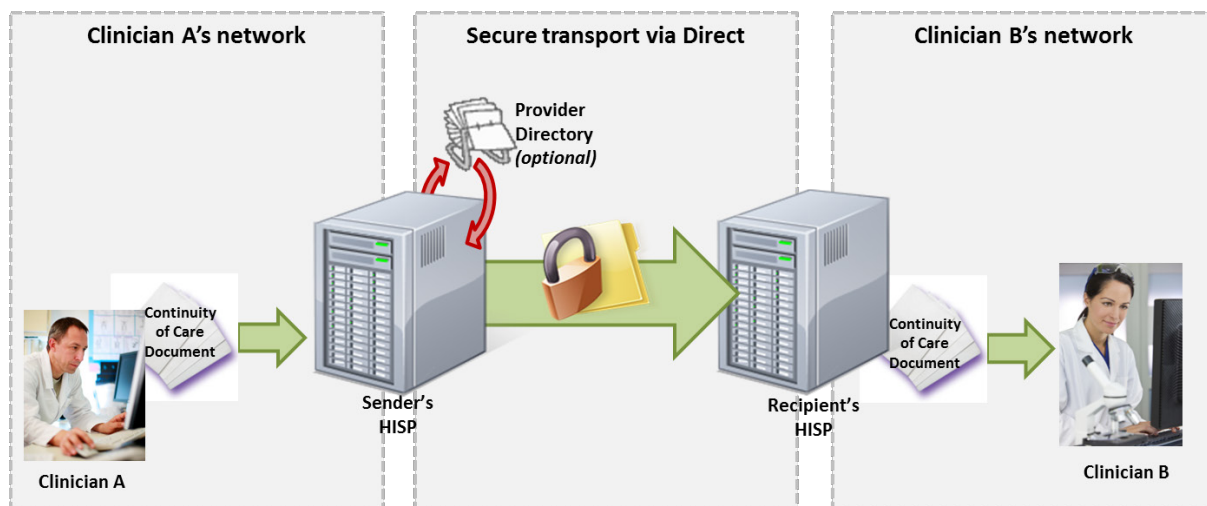
Direct Exchange is a protocol for encrypted messaging that supports the secure electronic exchange of health information between trusted entities (e.g. physicians, nurse practitioners, physician assistants, and case managers). Providers do not have to use an EHR in order to exchange information using Direct. Without an EHR, Direct Exchange works much like email; however, unlike most email, it is both highly secure and HIPAA-compliant. Health care providers with EHRs can use Direct as a complement to their current systems, either as a separate but parallel application or as a fully-integrated feature of their EHR system. Behind the system, Direct is enabled by health information service providers (HISPs) that are contracted to manage security and transport for Direct Exchange, and, in some organizations, by a provider directory, which providers can query for the right Direct address.

> **WHAT IS DIRECT EXCHANGE?**
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> In its simplest form, Direct Exchange functions like email accessed through a secure web portal, except that the messages are encrypted and can only be accessed by the intended recipient, thereby ensuring compliance with The Health Insurance Portability and Accountability Act (HIPAA). Where Direct messaging is integrated with EHR technology, messages and attachments can be sent and received directly from within the user's desktop rather than through a separate portal, which is much more convenient for the user and more easily sent and received in the format used by the EHR application.

In response to customer demand and certification requirements, a growing number of EHR vendors are integrating Direct Exchange standards into their products, and Direct protocols and specifications are interoperable between vendor solutions. Therefore, when fully implemented by vendors and providers, Direct will enable exchange between vendor solutions, so CIOs can choose the certified solution that best meets the requirements of their hospitals or other facilities.

Figure 1 Direct Exchange

What are the benefits of Direct?

The ability to exchange messages and electronic attachments securely using Direct exchange is an immediate benefit to hospitals, patients, and their physicians. As EHR vendors integrate Direct exchange functionality with their technology and as more robust use cases emerge, the value and demand for Direct exchange will grow.

Sending and receiving secure messages and attachments

Using Direct Exchange, providers can quickly and easily send and receive secure messages and electronic attachments to others in their network (i.e. PCPs, other specialists, health caregivers, case managers, acute care providers and payers), without concern about HIPAA compliance. Often, nurses or support staff must call or use paper faxes to convey patient information to other providers and manually document a record of that communication. With Direct, health professionals can draft a message, attach a file (i.e. lab result, referral paperwork, or prescription), and immediately send it to a colleague without moving from desk to printer to fax machine. Additionally, upon receipt of a Direct message with an attachment, health professionals can easily save electronic attachments to the appropriate patient's record and remove additional steps from the office workflow.

Communicating with patients

Direct Exchange provides opportunities for health care practices to communicate more easily with patients. Using Direct, patients, providers and their support staff can exchange secure messages about the patient's treatment plan or diagnosis. For instance, a provider has the ability to update a patient about a diagnosis and send a lab result directly to the patient. Similarly, patients can send messages to schedule an appointment or to update providers on health indicators often monitored at home, such as blood pressure or weight.

> **HOW DOES DIRECT EXCHANGE SUPPORT THE REFERRAL PROCESS?**
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> "Closed loop referrals" are one of the most promising use cases for HIE technology. When fully implemented, a referring provider's EHR will quickly and easily notify the consulting provider by generating a message that includes a longitudinal care summary, medication lists, lab results, and other information needed to support informed decision-making about diagnosis and treatment effectively and efficiently. Upon receipt of the referral and delivery of care to the patient, the consulting provider can generate and send a Direct message back to the referring provider to effectively "close the loop," communicating the outcomes from the consult and recommending any further actions to be taken to assure good outcomes for the patient.

Additionally, patients have begun to more actively manage their care through Personal Health Records (PHR), which aggregate diagnoses and treatment plans in an online personal repository. Patients can then view their longitudinal diagnosis or treatment history. Patients can manually update PHRs, or clinicians can assist individuals by sending diagnoses or treatment plans to the PHR using Direct.

Facilitating referrals and transitions of care

Compared to phone calls and paper faxes, Direct Exchange delivers more seamless referrals between providers and better experiences for patients during transitions of care. Clinicians can exchange referral and payer forms, along with care summaries, medication lists, and lab results with their colleagues in advance or after their encounter with the patient, as needed. These documents can be exchanged immediately as electronic attachments to a Direct message, eliminating the need for courier or patient transport of records, thereby reducing costs and the risk of lost documents and incomplete or inaccurate information. With test results and diagnoses in hand, clinicians are less likely to schedule unnecessary or duplicative tests, avoiding inconvenience, cost and often pain to the patient, but are better equipped to respond effectively to support diagnosis, care and treatment for the patient.

What do CIOs need to consider for Direct exchange?

Enabling trust between exchanging entities

In addition to technical specifications, CIOs must be aware of the legal agreements that may be required for information exchange via Direct. Direct is predicated on exchange with a known and trusted entity. For many organizations, "trust" means execution of a legal agreement. Establishing this trust may require a legal agreement with each separate entity with whom information is exchanged, or with a HISP (Health Information Service Provider) in which trust is shared among each organization that is a member of the HISP.

Among the various trust frameworks and policies which are available to enable secure exchange of health information, DirectTrust.org is emerging as a preferred model and is a good resource for CIOs who are considering how their systems must be adapted to enable Direct Exchange.

Knowing the difference between secure email and Direct exchange

While all Direct messages are secure messages, not all secure messages are Direct messages. CIOs can ensure that a secure email feature complies with Direct specifications and complies with the emerging "best practices" guidelines for implementation by asking vendors and service providers a few simple questions:

- Are messages encrypted according to the Direct Applicability Statement Specification?
- Does your solution provide a Direct address for each user?
- Does your solution provide an x509 certificate for my organization, in compliance with the Direct specifications?
- What trust network, if any, is associated with your solution?
- What other standards and protocols are supported by your solution?

Applicable standards and supporting documentation

- Standard: Applicability Statement for Secure Health Transport
- Supporting doc: S&I Framework Certificate Discovery for Direct Project Implementation Guide
- Standard: XDR and XDM for Direct Secure Messaging Specification
- Standard: NwHIN SOAP Based Secure Transport RTM v 1.0

Enrolling in Direct

Visit HealthIT.gov to learn more.

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